

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Withdrawn) A pretreatment method for element analysis of a metal sample, comprising removing contaminants on a surface of the metal sample by sputtering while at least one electrode for sputtering is cooled.

2. (Withdrawn) The pretreatment method according to claim 1, wherein the metal sample is at a side of a cathode and a plurality of anodes face the cathode, and at least one of the anodes is cooled for sputtering.

3. (Withdrawn) The pretreatment method according to claim 1, wherein the metal sample is at a side of an anode and a plurality of cathodes face the anode, and at least one of the cathodes is cooled for sputtering.

4. (Withdrawn) The pretreatment method according to claim 1, comprising analyzing an element in the metal sample selected from the group consisting of carbon, oxygen, nitrogen and sulfur.

5. (Withdrawn) The pretreatment method according to claim 2, comprising analyzing an element in the metal sample selected from the group consisting of carbon, oxygen, nitrogen and sulfur.

6. (Withdrawn) The pretreatment method according to claim 3, comprising analyzing an element in the metal sample selected from the group consisting of carbon, oxygen, nitrogen and sulfur.

7. (Withdrawn) The pretreatment method according to claim 1, wherein the element analysis of the metal sample is by fusion analysis or combustion analysis.

8. (Withdrawn) The pretreatment method according to claim 2, wherein the element analysis of the metal sample is by fusion analysis or combustion analysis.

9. (Withdrawn) The pretreatment method according to claim 3, wherein the element analysis of the metal sample is by fusion analysis or combustion analysis.

10. (Withdrawn) The pretreatment method according to claim 4, wherein the element analysis of the metal sample is by fusion analysis or combustion analysis.

11. (Withdrawn) The pretreatment method according to claim 5, wherein the element analysis of the metal sample is by fusion analysis or combustion analysis.

12. (Canceled)

13. (Currently Amended) A pretreatment apparatus for element analysis of a metal sample, comprising:

a cathode for holding a metal sample;

anodes arranged to counter in a face to face arrangement with an entire side of the cathode and on opposing sides of the cathode for sputtering;

a pretreatment chamber for storing the cathode, the anodes and the metal sample under an inert gas atmosphere; and

a cooling device for cooling at least one of the anodes or the cathode.

14. (Original) The pretreatment apparatus according to claim 13, comprising a plurality of the anodes arranged to counter the cathode, and the cooling device cools at least one of the anodes.

15. (Previously Presented) An analyzing apparatus for element analysis of a metal sample, comprising:

an anode for holding a metal sample;

cathodes arranged to counter the anode for sputtering;

a pretreatment chamber for storing the anode, the cathodes and the metal sample under an inert gas atmosphere;

a cooling device for compulsively cooling at least one of the cathodes or the anode;

a reaction chamber, connected to the pretreatment chamber through a shutter, for heating the metal sample; and

a detector for detecting trace elements given off by the heated metal sample.

16. (Previously Presented) The analyzing apparatus according to claim 15, comprising a plurality of the cathodes arranged to counter the anode, and the cooling device cools at least one of the cathodes.

17. (Previously Presented) An analyzing apparatus for element analysis of a metal sample, comprising:

a pretreatment chamber having means for removing contaminants on the surface of the metal sample by sputtering;

means for cooling at least one target site, at least one of the target sites including at least one of electrodes for sputtering, counter electrodes for sputtering, and a holder; and

a reaction chamber connected to the pretreatment chamber having means for heating the metal sample and means for detecting trace elements given off by the heated sample.

18. (Previously Presented) The pretreatment apparatus according to claim 13, further comprising:

a reaction chamber, connected to the pretreatment chamber through a shutter, for heating the metal sample; and

a detector for detecting trace elements given off by the heated metal sample.

19. (Previously Presented) A pretreatment method for element analysis of a metal sample, comprising:

holding the metal sample using a cathode;

sputtering using anodes arranged to counter the cathode;

providing an inert gas atmosphere and a pretreatment chamber that stores the

anodes, the cathodes, and the metal sample; and

cooling at least one of the cathode and one of the anodes.
